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(54) FRUCTOSYLAMINO ACID OXIDASE GENE, NEW RECOMBINANT DNA AND PRODUCTION OF FRUCTOSYLAMINO ACID OXIDASE

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain the subject new gene, a gene encoding a protein having a specific amino acid sequence and exhibiting fructosylamino acid oxidase activity, and usable in e.g. the production of enzymes useful for e.g. assaying Amadori compounds in vivo or in foods.

SOLUTION: This new fructosylamino acid oxidase gene which encodes a protein having an amino acid sequence of the formula, or a protein having an amino acid sequence wherein one or more amino acids are deleted, substituted or added in the amino acid sequence of the above formula and also having fructosylamino acid oxidase activity, is used in e.g. the production of enzymes catalyzing reactions to form glyoxylic acid, α -amino acids, α -ketoaldehydes and hydrogen peroxide through oxidation of iminodicacetic acid and its derivatives (Amadori compounds) and therefore being useful for e.g. assaying Amadori compounds in vivo or in foods. This new gene is obtained by cloning *Corynebacterium* sp. No. 2-3-1 (FERM BP-6183) chromosome DNA.

Net	Ser	Ser	Thr	Ala	Thr	Leu	His	Val	Ala	Val	His	Gly	Gly	Gly
				5					10					16
His	Leu	Gly	Val	Ser	Thr	Ala	Val	His	Leu	Asp	Gln	Gly	Ala	
				23				20						23
Val	Val	Thr	Leu	Leu	Thr	Glu	Gln	Gly	Leu	Ala	Ser	Glu	Ala	Thr
				37				40						45
<p style="text-align: center;">↓</p>														
Gly	Pro	Val	Ala	Phe	Thr	His	Ser	Gly	Ala	Thr	Leu	Gly	Leu	His
				55					50					55
Ala	Gly	Glu	Leu	Arg	Ser	Gly	Gln	His	Leu	Thr	Gly	Asp	Leu	His
				62					65					62
Arg	His	Phe	Ala	Thr	Phe	Arg	Arg	Gly	Arg	Phe	Ser			
				85					80					

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